

## **24. Development of the BARS-Based Assessment Test to Measure Core Competencies for Vocational High School Students**

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### **1. The purpose of this study**

Industrial organizations are increasingly getting more and more enormous with rapid industrialization and advances in information technology, and the duties that individual should perform are diversified. For effectively coping with these environmental changes, the core competencies, which were required basically in most occupations, were more emphasized than specialized knowledge.

In this context, the objectives of this study were to re-establish the concept and dimensions of core competencies of vocational high school students, to derive main activities based on BARS(Behaviorally Anchored Rating Scale), to develop reasonable test for diagnosing core competencies, and to suggest several countermeasures for effective uses.

### **2. The development of BARS–Based Core Competencies Assessment Test for vocational high school students**

Step 1: Define the areas of core competencies and develop behavioral anchors

For improving its validity and reliability, the BARS processes were applied to develop the test. First, this study set up the levels of core competencies and selected the related main behaviors through literature review, discussion with experts, the review on the business priorities in core competencies, and exploratory factor analysis. Through these processes, this study could identify 12 categories and 6-10 behavioral anchors in each category.

**Step 2: Re-translate**

194 vocational high school teachers were asked to respond the questions about the appropriateness and level of behavioral anchors. The anchors(or items) that obtained more than 60% agreement were selected as appropriate items. If any items were identified as beyond its criterion(over 60% agreement or 1.5-1.7 of its standard deviation), this study discussed its appropriateness with experts.

**Step 3: Fix behavioral anchors on a scale**

7 experts of the Sector Human Resource Development Councils(SHRDC) were asked to respond the questions about the levels of vocational high school students in each behavioral anchors. Based on the results of this survey, the scales(draft) of 12 core competencies were developed.

**Step 4: Develop the Core Competencies Assessment Test and set up its norm**

For setting up its norm, 1,040 vocational high school students and their 36 teachers were asked to answer the questionnaire for assessing core competencies of vocational high school students. The survey on 7 SHRD personnels were also conducted for identifying the competency level those businesses required. The results indicated that competencies levels which teachers evaluated were higher than the levels of businesses, except the numeracy area. This means that efforts should be strengthened for improving the numeracy competency and that the core competencies that are required for vocational high school graduates could be de-evaluated.

**3. Countermeasures for effectively using of the Core Competencies Assessment Test**

The BARS-based Core Competencies Assessment Test was designed to make a diagnosis of the competency levels for vocational high school students. To find the value of core competency and compare with its norm, students and teachers should fill in the form of one decimal place. And then, for interpreting the result, the value displayed on the each 12-categorized graph, which was including the level of core competency required on business field, should be presented. The standard of vocational high school

students on each 12-categorized area was placed on the last part of this paper. It is based on self-development and the students seek their directions.